

AMENDMENTS TO THE CLAIMS:

Please amend the claims, as indicated below. This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A signal processing method comprising:

receiving a first wireless communication signal, the first signal including
pulse shaping distortion, wherein the pulse shaping distortion is
produced by pulse shaping;

obtaining an approximation of the pulse shaping distortion;

~~separating~~ extracting the approximation of the pulse shaping distortion

from the first signal to obtain a second signal; and

processing the second signal to obtain a user signal.
2. (Original) The method of claim 1, further comprising:

conducting a single-user detection; and

obtaining an amplitude estimate and a symbol delay for a user in a frame.
3. (Original) The method of claim 1, wherein the second signal has insignificant or no pulse shaping effects.

4. (Currently Amended) The method of claim 1, wherein ~~separating~~ extracting the approximation of the pulse shaping distortion from the first signal comprises applying an equalization between the second signal and an original signal before pulse shaping.
5. (Currently Amended) The method of claim 1, wherein ~~separating~~ extracting the approximation of the pulse shaping distortion from the first signal comprises applying a decision feedback equalization between the second signal and an approximation of an original signal before pulse shaping based on a current decision.
6. (Currently Amended) The method of claim 1, wherein ~~separating~~ extracting the approximation of the pulse shaping distortion from the first signal comprises applying at least one order of perturbation to adjust the approximation of the pulse shaping distortion.
7. (Currently Amended) The method of claim 1, wherein ~~separating~~ extracting the approximation of the pulse shaping distortion from the first signal comprises:
 - applying at least one equalization; and
 - repetitively applying at least one order of perturbation to adjust the approximation of the pulse shaping distortion.

8. (Currently Amended) The method of claim 1, wherein ~~separating~~ extracting the approximation of the pulse shaping distortion from the first signal comprises ~~separating~~ subtracting an approximately known function of pulse shaping from an unknown function of a time-varying channel function.
9. (Currently Amended) A signal processing method comprising:
 - receiving a first wireless communication signal, the first signal including non-channel distortion, wherein the non-channel distortion is produced by a non-channel function;
 - obtaining an approximation of the non-channel distortion;
 - ~~separating~~ extracting the approximation of the non-channel distortion from the first signal to obtain a second signal that includes a time-varying channel function; and
 - processing the second signal to obtain a user signal.
10. (Previously Presented) The method of claim 9, wherein the non-channel function comprises a transformation function.
11. (Previously Presented) The method of claim 9, further comprising:
 - conducting a single user detection; and
 - obtaining an amplitude estimate and a symbol delay for a user in a frame to obtain the approximation of the non-channel distortion.

12. (Previously Presented) The method of claim 9, wherein the second signal has insignificant or no non-channel distortion.
13. (Currently Amended) The method of claim 9, wherein ~~separating~~ extracting the approximation of the non-channel distortion from the first signal comprises applying an equalization between the second signal and an original signal before non-channel transformation.
14. (Currently Amended) The method of claim 9, wherein ~~separating~~ extracting the approximation of the non-channel distortion from the first signal comprises applying a decision feedback equalization between the second signal and an approximation of an original signal before non-channel transformation based on a current decision.
15. (Currently Amended) The method of claim 9, wherein ~~separating~~ extracting the approximation of the non-channel distortion from the first signal comprises applying at least one order of perturbation to adjust the approximation of the non-channel distortion.
16. (Currently Amended) The method of claim 9, wherein ~~separating~~ extracting the approximation of the non-channel distortion from the first signal comprises ~~separating~~ subtracting an approximately known non-channel distortion from an unknown distortion of a time-varying channel function.

17. (Currently Amended) The method of claim 9, wherein ~~separating~~ extracting the approximation of the non-channel distortion from the first signal comprises:
- applying at least one equalization; and
 - repetitively applying at least one order of perturbation to adjust the approximation of the non-channel function.
18. (Currently Amended) A signal processing system, comprising:
- a receiver for receiving a first signal for wireless communication;
 - a tracking device for obtaining an amplitude estimate and a symbol delay for a user;
 - an approximating device, coupled to the tracking device, for providing an approximation of non-channel distortion in the first signal, wherein the non-channel distortion is produced by a non-channel function in the first signal; and
 - a ~~signal-separating~~ signal-extracting device, coupled to the approximating device, for ~~separating~~ extracting the approximation of the non-channel distortion from the first signal to obtain a second signal that includes a time-varying channel function.
19. (Previously Presented) The system of claim 18, wherein the non-channel function comprises a transformation function.

20. (Currently Amended) The system of claim 18, wherein ~~separating~~ extracting the approximation of the non-channel distortion from the first signal comprises at least one of the following process:

applying at least one equalization; and

applying at least one order of perturbation to adjust the approximation of the non-channel distortion.

21. (Cancelled)